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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------|------------------|
| 10/766,727 | 01/27/2004 | Roland Gallay | M101US | 3438 |
| 7590 | 11/18/2004 | | EXAMINER HA, NGUYEN T | |
| Mark Wardas Maxwell Technologies, Inc. 9244 Balboa Avenue San Diego, CA 92123 | | | ART UNIT | PAPER NUMBER |
| | | | 2831 | |

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/766,727 | Applicant(s) GALLAY ET AL. | |
| | Examiner Nguyen T Ha | Art Unit 2831 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract is too short.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Farahmandi et al. (US 5,862,035).

Regarding claim 19, Farahmandi et al. disclose a capacitor comprising a double layer capacitor (10) and housing means (11) for housing the double layer capacitor (figure 1).

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4. Claims 18 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Noguchi et al. (US 6,433,997).

Regarding claim 18, the method steps of making a battery-sized capacitor are inherent in the structure device as disclosed by Noguchi et al. Noguchi et al. disclose:

- providing a double layer capacitor (1);
- providing a battery sized housing/vessel (2), the housing including an open end (column 2, lines 41-42);
- inserting the double layer capacitor into the open end of the housing (figure 1); and
- sealing the open end of the housing (column 2, lines 41-42).

Regarding claims 21 & 23, Noguchi et al. disclose a battery sized energy storage device/double-layer capacitor (figure 1) comprising:

- a housing (2, column 2, line 39); and
- a rolled electrode (3, column 2, line 39), the rolled electrode including two collectors (11 & 14, column 5, lines 18-19), wherein the two collectors and the housing comprise substantially the same metal (column 2, line 50 and 59-60 and column 3, lines 24-25), wherein the collectors (11 & 14) are coupled to the housing to form an electrical connection (figure 1).

Regarding claim 22, Noguchi et al. disclose the electrical connection providing a polarity independent path for application of energy to the energy storage device (figure 2).

Regarding claim 24, Noguchi et al. disclose the electrical connection being able to receive energy with positive or negative polarity (6 or 7, figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farahmandi et al. (US 5,862,035) in view of Harats et al. (US 5,554,918).

Regarding claim 1, Farahmandi et al. disclose a capacitor comprising:

- a housing/cell holder (11, column 4, lines 17-18);
- a capacitor cell (10, column 4, lines 16-17), the cell disposed in the housing and electrically coupled to the housing (figure 1).

Farahmandi et al. fail to teach the housing having dimensions that conform to standardized battery dimensions.

Harats et al. teach a battery having a housing with a size corresponding to a standard cell size (column 4, lines 27-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the battery housing design of Harats with Farahmandi et al. capacitor cell in order to enable the battery to be used in a device accepting standardized battery configurations.

Regarding claims 2-5, Farahmandi et al., as modified, show all of the claimed limitations discussed above with respect to claim 1. **Harats et al. further teach** the housing comprises a standard D-cell sized battery (claim 2), C-cell sized battery (claim 3), AA-cell sized battery (claim 4) and an AAA-cell sized battery (claim 5) form factor (column 4, lines 27-30).

Regarding claim 6, Farahmandi et al. further disclose the housing comprises one or more connectors/electrical leads (28 & 29, column 4, line 62), wherein the connectors adapted for connection with an electrical circuit (column 7, lines 62-65). It would have been obvious matter of design choice to have one or more connectors comprise standardized battery connectors, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose, 105 USPQ 237 (CCPA 1955)*.

Regarding claim 7, Farahmandi et al. discloses the capacitor cell comprises a double-layer capacitor (column 7, lines 16-17).

Regarding claim 8, Farahmandi et al. disclose the double-layer capacitor comprising a dry particle based electrode/carbon electrode (column 7, lines 23-25).

Regarding claim 9, Farahmandi et al. disclose the double-layer capacitor comprises a dry particle based rolled electrode (column 19, lines 66-67 and column 20, lines 1, figure 11C).

Regarding claim 10, Farahmandi et al. disclose the double layer capacitor includes two collectors (22, 24, column 7, lines 21-22), wherein the collectors are electrically coupled to the housing (figure 1), wherein the two collectors and the housing comprise substantially the same metal (column 7, lines 34-35, column 22, lines 1-4).

Regarding claim 11, Farahmandi et al. disclose the capacitor comprising a nominal maximum operating voltage of about 2.5 to 3.0 volts (column 5, lines 48-54, which is within the claimed range).

Regarding claim 12, Farahmandi et al. disclose the capacitor comprises a capacitance of about 0.1 Farad or above (column 4, lines 30-31, which is within the claimed range).

Regarding claim 13, Farahmandi et al. disclose the capacitor comprises a specific energy density at about 2.5 volts of less than or equal to about 6.5 Wh/kg (column 4, lines 32-33, which is within the claimed range).

Regarding claim 14, Farahmandi et al. disclose the capacitor comprises a specific power density at about 2.5 volts of less than about 8700 W/Kg (column 4, lines 33-34, which is within the claimed range).

Regarding claim 15, the teaching of Farahmandi et al. in view of Harats including all the claimed limitations discussed above with respect to claim 2 above, except for the housing comprising an outer diameter of $33 \pm 0/-1$ mm and a height of $61.5 \pm 0/-2$ mm. It would have been an obvious matter of design choice to have the housing comprise an outer diameter of $33 \pm 0/-1$ mm and a height of $61.5 \pm 0/-2$ mm, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. ***In re Rose, 105 USPQ 237 (CCPA 1955).***

Regarding claim 16, Farahmandi et al., as modified, show all the claimed limitations with respect to claim 1 above. Harats et al. further teach the housing comprises a standardized power tool battery sized form factor (column 4, lines 27-28).

Regarding claim 17, Farahmandi et al. disclose a double layer capacitor (figure 1) comprising:

- a housing (11, column 4, lines 17-18), the housing comprising dimensions that conform to standardized battery dimensions; and
- a double layer capacitor (10, column 4, lines 16-17) electrically coupled to the housing within the housing (figure 1).

Farahmandi et al. fail to teach the housing comprising dimensions that conform to standardized battery dimensions.

Harats et al. teach a battery having a housing of a size corresponding to a standard cell size (column 4, lines 27-35).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the battery housing of Harats with Farahmandi et al. capacitor cell in order to enable the battery to be used in a device accepting standardized battery configurations.

Regarding claim 20, Farahmandi et al. discloses all the claimed limitations discussed above with respect to claim 19, except for the housing means comprises a battery form factor sized housing.

Harats et al. teach a housing means comprising a battery form factor sized housing (column 4, lines 27-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the battery housing of Harats with Farahmandi et al. capacitor cell in order to enable the battery to be used in a device accepting standardized battery configurations.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noguchi et al. (US 6,433,997) in view of O'phelan et al. (US 6,509,588).

Regarding claim 25, Noguchi et al. disclose all the claimed limitations discussed above with respect to claim 21, except for the electrical connection comprising a laser weld.

O'phelan et al. teach a capacitor having connection members 206 and 306 being laser edge-welded (column 7, lines 36-37).

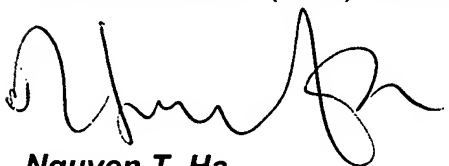
It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the laser weld of O'phelan with Noguchi for welding the connection in order to prevent damage to the connection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T Ha whose telephone number is 571-272-1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nguyen T. Ha
November 10, 2004